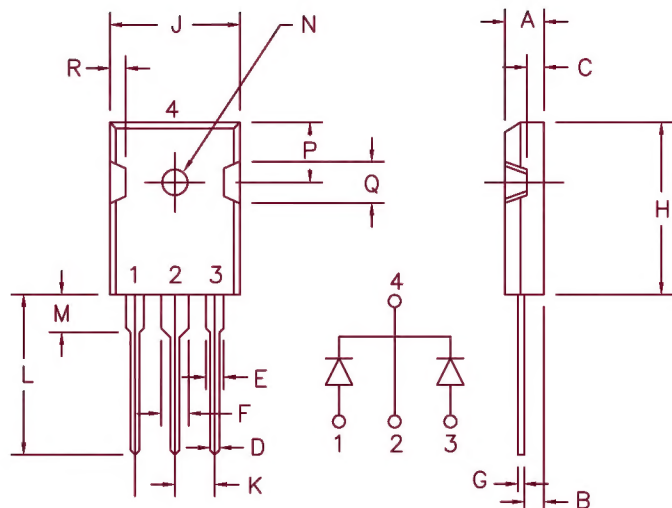


30Amp Schottky Barrier Rectifier FST3040 — FST3050



Similar to TO-247AD

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	.185	.209	4.70	5.31	
B	.087	.102	2.21	2.59	
C	.059	.098	1.50	2.49	
D	.040	.055	1.02	1.40	
E	.079	.094	2.01	2.39	
F	.118	.133	3.00	3.38	
G	.016	.031	.410	0.78	
H	.819	.883	20.80	22.4	
J	.627	.650	15.93	16.5	
K	.215	—	5.46	—	Typ.
L	.790	.810	20.07	20.6	
M	.157	.180	3.99	4.57	
N	.139	.144	3.53	3.66	Dia.
P	.255	.300	6.48	7.62	
Q	.170	.210	4.32	5.33	
R	.080	.110	2.03	2.79	

Microsemi Catalog
Number

FST3040
FST3045
FST3050

Repetitive Peak
Reverse Voltage

40V
45V
50V

Transient Peak
Reverse Voltage

40V
45V
50V

- Schottky Barrier Rectifier
- Guard ring for reverse protection
- Low power loss, high efficiency
- High surge capacity
- V_{RRM} 40 to 50 Volts

Electrical Characteristics

Average Forward Current per pkg.
Average Forward Current per leg
Maximum Surge Current per leg
Max. Peak Forward Voltage per leg
Max. Peak Forward Voltage per leg
Max. Peak Reverse Current per leg
Max. Peak Reverse Current per leg
Typical Junction Capacitance per leg

$I_F(AV)$ 30Amps
 $I_F(AV)$ 15Amps
 I_{FSM} 350 Amps
 V_{FM} .50 Volts
 V_{FM} .66 Volts
 I_{RM} 15 mA
 I_{RM} 500 μ A
 C_J 890pF

$T_C = 157^\circ\text{C}$, Square wave, $R_{\theta JC} = 0.9^\circ\text{C/W}$
 $T_C = 157^\circ\text{C}$, Square wave, $R_{\theta JC} = 1.8^\circ\text{C/W}$
8.3ms, half sine, $T_J = 175^\circ\text{C}$
 $I_{FM} = 15\text{A}$, $T_J = 175^\circ\text{C}^*$
 $I_{FM} = 15\text{A}$, $T_J = 25^\circ\text{C}^*$
 V_{RRM} , $T_J = 125^\circ\text{C}^*$
 V_{RRM} , $T_J = 25^\circ\text{C}$
 $V_R = 5.0\text{V}$, $T_J = 25^\circ\text{C}$

*Pulse test: Pulse width 300 μ sec, Duty cycle 2%

Thermal and Mechanical Characteristics

Storage temp range
Operating junction temp range
Max thermal resistance per leg
Max thermal resistance per pkg.
Mounting Torque
Weight

T_{STG}
 T_J
 $R_{\theta JC}$
 $R_{\theta JC}$

-55°C to 175°C
 -55°C to 175°C
 1.8°C/W
 0.9°C/W
10 inch pounds maximum (4-40 screw)
.22 ounces (6.36 grams) typical

FST3040 — FST3050

Figure 1
Typical Forward Characteristics — Per Leg

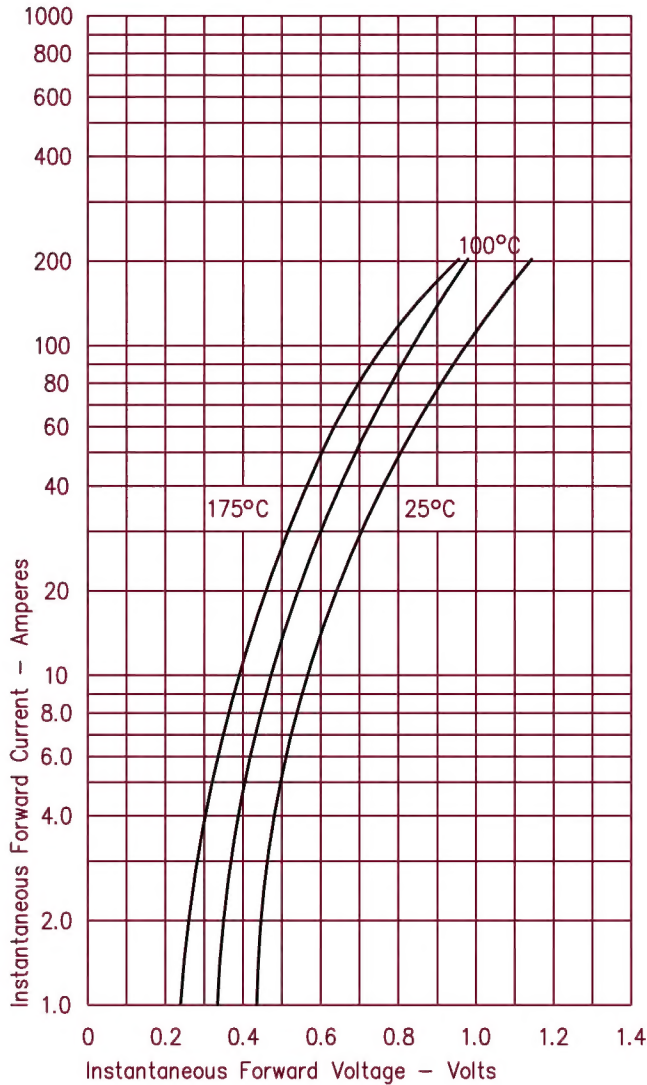


Figure 3
Typical Junction Capacitance — Per Leg

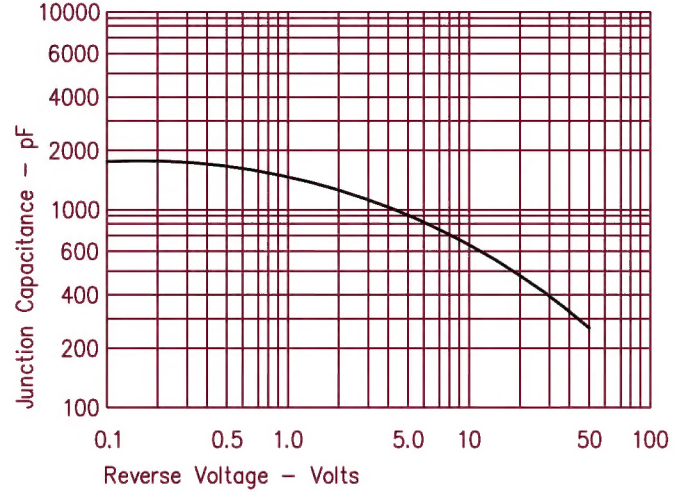


Figure 4
Forward Current Derating — Per Leg

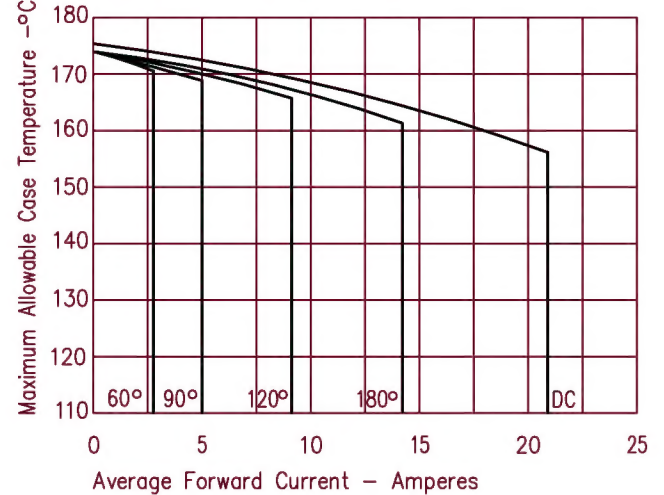


Figure 2
Typical Reverse Characteristics — Per Leg

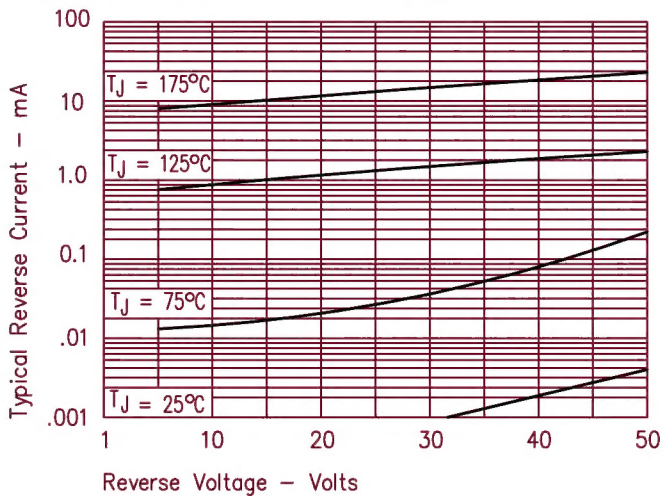


Figure 5
Maximum Forward Power Dissipation — Per Leg

